

ABSTRACT

Includes the step of crystal-growing a group III-V compound semiconductor layer containing at least nitrogen and arsenic as group V elements on a single crystal substrate. The step of crystal-growing the compound semiconductor layer includes the step of supplying a nitrogen source material to the single crystal substrate so that the nitrogen source material interacts with aluminum at least on a crystal growth surface of the compound semiconductor layer. Thus, a method is provided for forming a group III-V compound semiconductor layer containing a group III-V compound semiconductor containing arsenic as a group V element and also containing nitrogen mix-crystallized therewith, which has superb light emission characteristics.

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